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Working mothers' second shift, personal resources, and self-care

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ABSTRACT

The stress of feeling rushed and busy are contemporary facts of life as evidenced by research on time pressure and overload. This is explained by conservation of resources theory which posits that when life demands (i.e. paid work, home/family work) excessively drain time and energy resources, stress can result. The purpose of this study was to examine working mothers as a population at risk for such stress, because in addition to paid work roles, most face a heavy second shift (i.e. home/family workload). Our path model tested hypothesized relationships pertaining to drained resources, opportunities for self-care and stress reduction, and well-being. Working mothers (440) completed web-based surveys and path analysis was used to fit the model. Findings showed mothers' second shift was associated with fewer time and energy resources, and resource availability was associated with increased self-care behaviors and decreased stress. Self-care was associated with several well-being and work-related outcomes, and stress partially mediated some relationships between self-care and outcomes. Future research should further investigate the benefits of self-care for working mothers, including social and emotional forms of self-care, to develop and disseminate targeted interventions to improve their well-being.

RESUMEN

El estrés de sentirse apresurado y ocupado son hechos contemporáneos de la vida como lo demuestra la investigación sobre la presión del tiempo y sobrecarga. Esto se explica por la teoría de la conversación de los recursos que postula que cuando la vida exige (i.e. trabajo remunerado, casa, trabajo doméstico / familiar) un drenaje excesivo del tiempo y de los recursos de energía, puede resultar el estrés. El propósito de este estudio fue para examinar a las madres que trabajan como una población en riesgo de sufrir por el estrés, porque en adición a los roles de trabajo remunerado, la mayoría se enfrenta a un segundo turno pesado (i.e. casa/la carga de trabajo familiar domestico). Nuestro modelo de ruta probó relaciones hipotéticas relacionadas con los recursos agotados, las oportunidades para el cuidado personal y la reducción del estrés, y el bienestar. Las madres que trabajan (n = 440) completaron una encuesta basadas en la web y se utilizó el análisis de ruta para ajustar el modelo. Los resultados mostraron

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que el segundo turno de las madres' fue asociado con menos tiempo y recursos de energía, y disponibilidad de recursos fue asociado con un mayor comportamiento de cuidado personal y una disminución del estrés. El cuidado personal fue asociado con unos varios resultados de bienestar y resultados relacionados al trabajo, y el estrés mediaba parcialmente algunas relaciones entre el cuidado personal y los resultados. Investigaciones en el futuro deberían investigar más a fondo los beneficios de cuidado personal para las madres trabajadoras, incluyendo las formas de cuidado personal social y emocional, para desarrollar y diseminar intervenciones específicas para mejorar su bienestar.

Contemporary life in the U.S. is characterized by abundant activity and time scarcity (Schor, 2008). Many people feel overly rushed, busy, or short on time (Gunthorpe & Lyons, 2004) as the number of life activities in the work, family, and leisure domains has increased (Mattingly & Bianchi, 2003). Increasing life activities consume more and more of peoples' time and energy resources (Fritz, Lam, & Spreitzer, 2011) with adverse effects. In the work domain, people can feel overloaded from having too many job tasks to complete in limited time (Galinsky, Kim, & Bond, 2001). The home/family domain is also susceptible to overload, with increasingly rigorous standards for parenting (Rizzo, Schiffrin, & Liss, 2013) and housework (Schor, 2008). Even leisure is increasingly associated with over-activity, effort, and a sense of obligation (Beatty & Torbert, 2003; Kleiber, 2000).

Cultural trends toward time pressure and overload have coincided with other social changes over the past 40 years, particularly related to gender roles. Unprecedented numbers of women now share the financial provider role with their male partners but most men have not made a parallel move to equitably share the home/family role with their female partners. This is particularly relevant to working mothers who, in addition to their paid work responsibilities, still have primary responsibility for their children and homes. Women's historically newer role of worker, when added to a relatively unchanged home/family role, results in a 'second shift' putting them at increased risk of time scarcity and overload (Hochschild & Machung, 2012). Working mothers have higher individual stress, work-family conflict, work engagement, and lower life satisfaction than working fathers (Hill, 2005; Kmec, 2011), and mothers report greater physical and psychological symptoms, especially with heavier workloads (Gjerdingen, McGovern, Bekker, Lundberg, & Willemsen, 2001). For this reason, working mothers are the population of interest in this study, and we hope this study will inform the development of targeted interventions to improve their well-being.

The second shift

One inequity between women's and men's home/family role has to do with time. Although women in the U.S. have decreased and men have increased their housework hours since the 1960s, women still spend about twice the time doing home/family work as men (Bianchi et al., 2012; Coltrane, 2000). Findings from the National Survey of Families and Households and Americans' Use of Time Project, American women do about 13–16

household work hours weekly, compared to their spouses who do about 7–10 hours weekly (Bianchi et al., 2012; Fuwa & Cohen, 2007). Mothers also spend substantially more time doing child care than fathers (Craig, 2006; Marshall, 2006; Raley, Bianchi, & Wang, 2012).

Women perform more home/family work no matter how many hours they spend in paid work (Coltrane & Adams, 2001; Doucet, 2001). The type of home/family work that women and men do also differs. Women do the most frequently-occurring, non-discretionary household tasks (e.g. meal preparation, house-cleaning, laundry), while men do more occasional, discretionary tasks (e.g. yard work, car maintenance, home repairs; Coltrane, 2000).

Time- and task-oriented approaches dominate the literature on household division of labor, while invisible forms of home/family work (e.g. cognitive and emotional labor) have been overlooked (Meier, McNaughton-Cassill, & Lynch, 2006). For example, women typically hold the role of household manager (Claffey & Mickelson, 2009), being primarily accountable for initiating, delegating and overseeing home/family tasks, while men often assume the helper role, with their involvement perceived as optional and in-assistance-to their female partners (Coltrane & Shih, 2010). Women do most of the home/family coordinating activities, such as making medical appointments, arranging child care, organizing meal time, and planning holidays (Hochschild & Machung, 2012; Thompson & Walker, 1989). Emotion work within the family, including behaviors such as comforting, encouraging, and facilitating interaction, is also more likely to be provided by women (Erikson, 2005), because they are socialized to be relational, acting with the intention of providing care for others. Taken together, these studies suggest that the second shift can be conceptualized as consisting of four main types of home/family work: routine household tasks, childcare tasks, household management, and emotion work.

Household labor research reveals the circumstances under which women face the heaviest home/family workloads. Marriage is a crucial point for the division of labor to become more traditional and gendered, with cohabiting unmarried couples experiencing a more egalitarian situation than married couples (Domínguez-Folgueras, 2013; Gupta, 1999). The division of labor splits even more traditionally along gender lines when children are born (Craig & Mullan, 2010; MacDermid, Huston, & McHale, 1990), regardless of the couple's pre-parenthood division of labor, professed egalitarian values, and the employment or education status of female partners (Bittman, England, Sayer, Folbre, & Matheson, 2003; Brines, 1994).

Resources and stress

The persistently gendered nature of the home/family work role results in heavy cumulative workload (i.e. paid work plus home/family work) for working mothers' that can excessively drain time and energy resources, resulting in stress. A helpful framework for understanding their situation is conservation of resources (COR) theory (Hobfoll, 1989) which states that people have a variety of resources available to fulfill the various activities of their lives. Stress is experienced when resources are lost or threatened, and well-being is maintained when people are able to conserve resources.

Time is an important and finite resource. Without enough time to accomplish life's activities, stress can result (Höge, 2009; Zuzanek, 1998). Likewise, physical and mental

energy are necessary resources for carrying out life's commitments, and stress may arise when energy is depleted (Baumeister & Vohs, 2007; Craig & Cooper, 1992; Hochschild & Machung, 2012). If people exert themselves over time, energy is drained and can result in feeling fatigued, sluggish, and tired. When people rest and recover from exertion, energy is replenished and can result in a feeling of vitality, positive arousal and alertness, and eagerness and ability to take action (Fritz et al., 2011; Quinn & Dutton, 2005). Due to the time and energy resources working mothers dedicate to their paid work and home/family demands, and based on previous evidence that drained resources are associated with stress, we propose (Figure 1):

Hypothesis 1a: Second shift is negatively associated with energy resources.

Hypothesis 1b: Second shift is negatively associated with time resources.

Hypothesis 2a: Energy resources are negatively associated with stress.

Hypothesis 2b: Time resources are negatively associated with stress.

Resources and self-care

Working mothers' self-care can be unfavorably affected by depleted time and energy resources (McIntyre & Rhodes, 2009). Self-care behaviors are decisions and actions that enhance health, prevent disease, limit illness, and restore health. They serve as a complement to formal medical care and allow people to be active agents in facilitating their health and shaping the circumstances that influence their health (McGowan, 2002). These practices are undertaken in an informed way, utilizing knowledge from health professionals, lay people, and peoples' experiences of what works well for them. Self-care behaviors (e.g. exercise, psychotherapy, social support) can be related to physical, mental, and social well-being (Last, 2002; World Health Organization, 1948) and are associated with decreased pain and depression, and increased quality of life (McGowan, 2002).

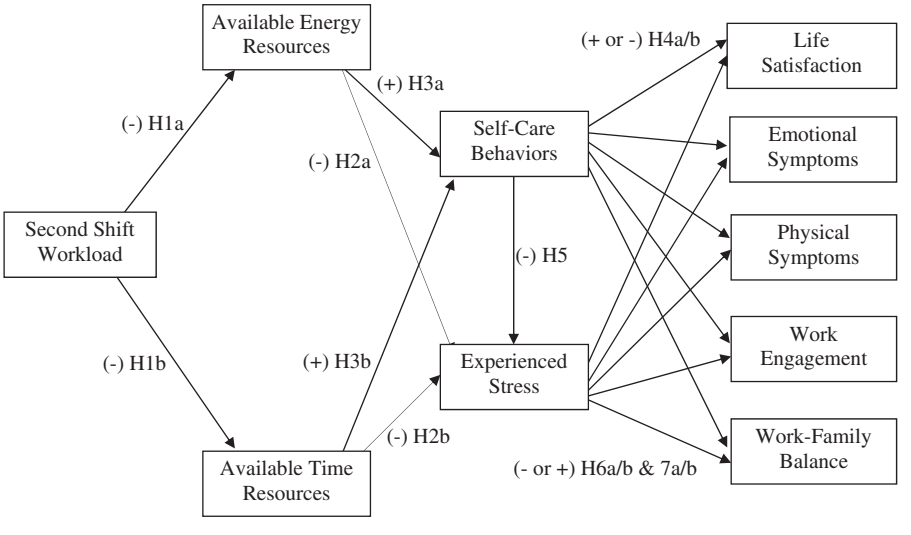

Figure 1. Conceptual model of second shift workload, resources, self-care, and stress.

Working mothers' drained resources place them in need of self-care to offset the adverse effects of their cumulative workload (Lundberg & Frankenhaeuser, 1999; May, 2008). However, self-care often occurs during free leisure time, and women report limited opportunities for leisure because of insufficient time and energy resources (Henderson & Bialeschki, 1991; McIntyre & Rhodes, 2009). Women report their leisure time is not correctly classified as 'free' time, because when in the presence of their spouse/children, they experience that time as part of their home/family role in which they are obliged to enact caregiving (Henderson & Shaw, 2006). Their leisure is not experienced as unconditional or unfettered, nor does it permit self-gratification and relaxation (Harrington & Dawson, 1995; Shaw & Henderson, 2005). When women do have true leisure, it is often interrupted by home/family obligations (Bittman & Wajcman, 2000). Thus we propose:

Hypothesis 3a: Energy resources are positively associated with self-care.

Hypothesis 3b: Time resources are positively associated with self-care.

Hypothesis 4a: Self-care is associated with increased beneficial outcomes (i.e. life satisfaction, work engagement, work-family balance) .

Hypothesis 4b: Self-care is associated with decreased adverse outcomes (i.e. emotional and physical symptoms).

In addition to being health-promoting, self-care behaviors (e.g. sleep, relaxation) can be stress-reducing, through recovery. According to the effort-recovery model, recovery occurs when exposure to work demands ceases and the expenditure of physical and mental energy is discontinued (Meijman & Mulder, 1998). During the recovery period, a person's psycho-biological systems return to baseline levels. Recovery can take the form of passive, active, or social leisure activities (Sonnentag, 2001) and can take place during evening time (Cropley & Millward Purvis, 2003), weekends (Fritz & Sonnentag, 2005), or vacations (Etzion, 2003). When recovery opportunities are unavailable, and workloads are continuous, people may experience sustained activation resulting in impaired performance, chronic stress, insomnia, and fatigue (Eriksen & Ursin, 2004; Sluiter, Van der Beek, & Frings-Dresen, 1999). Time-pressured and overloaded lifestyles are problematic because they simultaneously intensify the need for recovery and restrict recovery opportunities (Kleiber, 2000; Schor, 2008; Zuzanek, 1998). Acknowledging that self-care may directly reduce stress, but may also mitigate the adverse impact of stress on well-being, we propose:

Hypothesis 5: Self-care is associated with decreased stress.

Hypothesis 6a: Stress is associated with decreased beneficial outcomes (i.e. life satisfaction, work engagement, work-family balance).

Hypothesis 6a: Stress is associated with increased adverse outcomes (i.e. emotional and physical symptoms).

Hypothesis 7a: Stress partially mediates the relationship between self-care and beneficial outcomes (i.e. life satisfaction, work engagement, work-family balance) .

Hypothesis 7a: Stress partially mediates the relationship between self-care and adverse outcomes (i.e. emotional and physical symptoms).

Method

Participants and procedure

Working mothers in the U.S. completed a 20-minute web-based survey. Eligibility criteria included: ≥18 years of age, ≥20 work hours a week, living with an employed male partner, and ≥1 child <18 at home. They were recruited through an on-line service that obtains adult research participants, and with a snowball technique (i.e. assisted by advanced undergraduate psychology students who received class credit for recruiting participants). Participants received an email inviting them to a study of work and personal life which also had the researcher's contact information, assurances of confidentiality, and a survey link.

A total of 527 mothers participated (i.e. 195 from on-line, and 332 from snowball). The response rate for the online recruitment was 70%. No response rate could be calculated for the snowball recruitment. Eighty-seven participants were excluded due to ineligibility or more than 50% missing data. The final sample included 440 mothers.

Respondent mean age was 39 (ranging 23–55). Eighty-seven percent were white and 61% had at least a Bachelor's Degree. Ninety percent were married, and the mean number of children at home was 1.7. Eighty-two percent worked full time and average job tenure was eight years. Mean paid work hours was 40 weekly (range was 20–72) and mean home/family work hours was 31 weekly (range was 2–100). Ninety-six percent of mothers' partners worked full time and the mean family income was $75,000–100,000.

Measures

Unless otherwise indicated, participants responded using a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Second shift. We assessed mothers' second shift relative to their spouse/partner. Four types of home/family work (i.e. routine household tasks, childcare tasks, household management, emotion work) were measured. A list of tasks from four scales was used with mothers indicating who more frequently performed each task. Respondents rated items from 1 (*always my spouse*) to 5 (*always me*) with a midpoint of 3 (*shared equally*). Except for the Emotion Work measure, they were also provided a 0 (*does not apply*) option. We calculated a mean of responses to all 29 items, with higher scores indicating a heavier second shift.

Household tasks were assessed with 10 items (e.g. clean the house) from existing scales (Barnett & Baruch, 1987; Cowan & Cowan, 1990; Meier et al., 2006). Meier et al. (2006) reported a .75 coefficient alpha for the scale. Childcare tasks were assessed with six items (e.g. attend to child when hungry) from existing scales (Bouchard & Lee, 2000; Meier et al., 2006). Meier et al. (2006) reported a .67 coefficient alpha for the scale. Household management was assessed with eight items (e.g. plan meals) from the Household Management scale (Meier et al., 2006). Meier et al. (2006) reported a .71 coefficient alpha of the scale. Emotion work was assessed with five items (e.g. praise family member) from the Emotion Work scale of Minnotte, Stevens, Minnotte, and Kiger (2007), who reported a scale coefficient alpha of .69.

Energy resources. Energy resources were assessed with the five-item Physical Strength subscale from the Shirom Melamed Vigor Measure, which has a reported .95 coefficient

alpha (Shirom, 2003). Respondents were prompted to respond how they felt at the end of a day to five items (e.g. I have a feeling of vitality). They rated each item from 1 (*not at all*) to 5 (*extremely*). We calculated a mean score, with higher scores indicating greater energy resources.

Time resources. Time resources were assessed with five items to measure life's pace from the Time Pressure scale (which has a $\alpha = .89$; Roxburgh, 2004) (e.g. I never seem to have enough time to get everything done), and four items to measure free time from the original Personal Free Time scale (e.g. I have plenty of free time to do the things I like to do). A mean score was created with the Personal Free Time and reverse-coded Time Pressure items, with higher scores indicating more time resources.

Self-care. This construct was assessed with an index that evaluates the extent to which participants engaged in five self-care behaviors that have been identified in research as lacking in the lives of working mothers: healthy eating, physical exercise, weight maintenance, adequate sleep, and relaxing leisure (Dzaja et al., 2005; Marcus, Dubbert, King, & Pinto, 1995; Miller & Brown, 2005; Williamson, Kahn, Remington, & Anda, 1990). Each of the five behaviors was scored on a three-point scale from 0 (*low self-care*), 1 (*moderate self-care*), or 2 (*high self-care*) and a summative index was calculated for each respondent, with higher scores indicating greater participation in self-care behaviors.

Stress. Stress was assessed using six items from the Stress in General scale of Stanton, Balzer, Smith, Parra, and Ironson (2001), who reported a coefficient alpha of .91. Respondents were prompted to think about whether six words described their life in general (e.g. pressured, overwhelming) and rated words with 0 (*no*), 1.5 (*cannot decide*), or 3 (*yes*). Mean scores were calculated, with higher scores indicating higher levels of life stress.

Outcome variables

Five outcome variables related to well-being and quality of life were used.

Life satisfaction. We used a measure of life satisfaction by Diener, Emmons, Larsen, and Griffin (1985), who reported a coefficient alpha of .87. Respondents rated their agreement with five items regarding their life in general (e.g. In most ways my life is close to ideal). Mean scores were calculated, with higher scores indicating higher life satisfaction.

Emotional symptoms. We used 16 items from the Brief Symptom Inventory (BSI) to assess experiences of anxiety, depression, and hostility (Derogatis & Spencer, 1983). Respondents rated the extent to which they experienced various symptoms in the past week (e.g. Feeling so restless you could not sit still [anxiety], Feelings of hopelessness about the future [depression], Getting into frequent arguments [hostility]). Items were rated from 1 (*not at all*) to 5 (*extremely*). Boulet and Boss (1991) reported the following coefficient alphas for subscales: .86 (anxiety), .89 (depression), and .78 (hostility). Mean scores were calculated, with higher scores indicating more severe emotional symptoms.

Physical symptoms. We used 21 items from three sources, including the BSI Somatic subscale (Derogatis & Spencer, 1983), the Daily Physical Symptoms measure (Larsen & Kasimatis, 1991), and five additional items to ensure a broad range of symptoms were assessed. Respondents rated the extent to which they experienced various symptoms in the past week (e.g. *pains in heart or chest*, *nausea or upset stomach)*. Items were rated from 1 (*not at all*) to 5 (*extremely*). A coefficient alpha of .85 was reported for the Somatic subscale (Boulet & Boss, 1991), and .76 for the Daily Physical Symptoms measure (Aronson, Barrett,

& Quigley, 2006). Mean scores were calculated, with higher scores indicating more severe physical symptoms.

Work engagement. Work engagement was assessed using eight items from two subscales (Dedication, Absorption) of the Utrecht Work Engagement Scale (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). Schaufeli et al. (2002) reported the following coefficient alphas for subscales: .89 (dedication) and .72 (absorption). Respondents rated their agreement with five items regarding their work (e.g. *I find the work that I do full of meaning and purpose)*. A mean score was calculated with higher scores indicating greater work engagement.

Work-family balance. We used the Work-Family Balance scale by Hill, Martinson, Ferris, and Zenger Baker (2004), who reported a coefficient alpha of .86. Respondents rated their agreement with seven items (e.g. *I have sufficient flexibility in my job to maintain adequate work and personal/family life balance*.) Most items were rated on a 5-point disagree/agree scale but other 5-point response scales were also used, consistent with the original measure. A mean score was calculated with higher scores indicating greater work-family balance.

Statistical analyses

Path analysis was used to fit the path model (see Figure 2) to the covariance matrix of our sample (AMOS 17; Arbuckle, 2008). An examination of each causal path in the proposed model indicated whether support was found for each hypothesis (i.e. path coefficients with significance levels of $p < .05$ denoted support). All proposed hypotheses were tested simultaneously in a single model. In addition to chi square (χ^2), a good model fit was determined by: a Confirmatory Fit Index (CFI) value of >.95 and a Root Mean Square Error of Approximation (RMSEA) value of <.06 (Hu & Bentler, 1999). Hypotheses regarding partial mediation of the relationship between self-care behaviors and outcomes were considered supported if both direct and indirect effects were statistically significant (Mathieu & Taylor, 2006). Sobel tests determined significance levels of indirect effects (Sobel, 1982).

Results

Means, standard deviations, intercorrelations, and reliabilities are reported in Table 1. Standard deviations for variables (except self-care and stress which did not use 5-point scales) ranged from .52 to .88, indicating sufficient variability to assess model fit. An overall inspection of descriptive statistics showed that mothers: did slightly more home/family work than their partners, felt they were low in time and energy resources engaged in moderately healthy behaviors, had moderate stress levels, had relatively high life satisfaction, few emotional and physical symptoms, and relatively high work engagement and work-family balance.

The overall model is presented in Figure 2 with standardized path coefficients. The overall fit of the path model was good [$\chi^2(15) = 30.33$, $p = .01$, CFI = .99, RMSEA = .05]. Although the χ^2 was significant, the two fit indices indicated that the model fit was very good.

Hypotheses 1a and 1b were supported. The second shift was associated with decreased energy ($\beta = -.11$, $p < .05$) and time resources ($\beta = -18$, $p < .001$). Hypotheses 2a and 2b

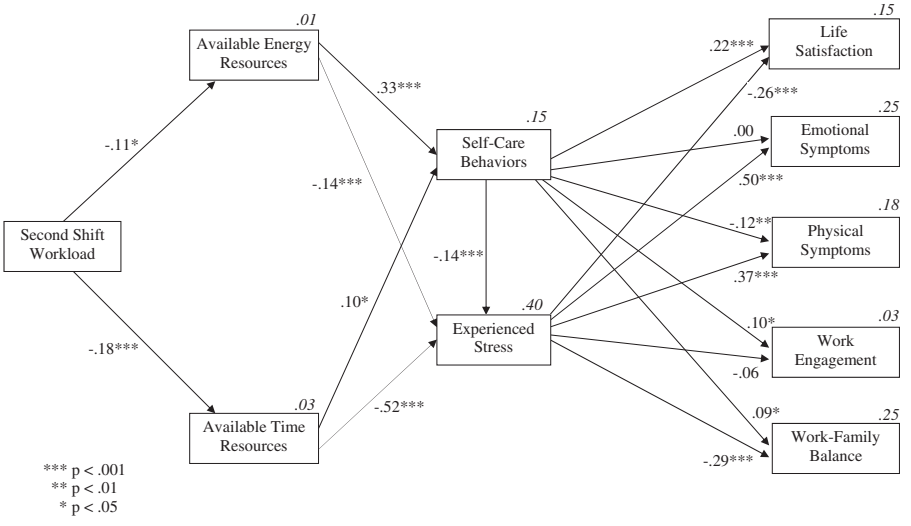

Figure 2. Final path model with standardized path coefficients.

were supported. Available energy ($\beta = -14$, $p < .001$) and time resources ($\beta = -52$, $p < .001$) were related to decreased stress.

Hypotheses 3a and 3b were supported. Available energy ($\beta = .33$, $p < .001$) and time resources ($\beta = .10$, $p < .05$) were associated with increased self-care. Hypotheses 4a and 4b were partially supported. Self-care was related to all outcome variables except one. Self-care was associated with decreased physical symptoms ($\beta = -12$, $p < .01$), and increased life satisfaction ($\beta = .22$, $p < .001$), work engagement ($\beta = .10$, $p < .05$), and work-family balance ($\beta = .09$, $p < .05$). It was not directly related to emotional symptoms ($\beta = .00$, $p = .94$). Hypothesis 5 was supported. Self-care was associated with decreased stress ($\beta = -14$, $p < .001$). Hypotheses 6a and 6b were partially supported. Stress was related to all outcome variables except one. Stress was associated with increased emotional ($\beta = .50$, $p < .001$) and physical symptoms ($\beta = .37$, $p < .001$), decreased life satisfaction ($\beta = -26$, $p < .001$) and work-family balance ($\beta = -29$, $p < .001$). It was not related to work engagement ($\beta = -6$, $p = .22$).

Hypotheses 7a and 7b received mixed support. We found the influence of self-care on life satisfaction, physical symptoms, and work-life balance was partially mediated by stress. The direct effect of self-care on life satisfaction was significant ($\beta = .22$, $p < .001$), as was the indirect effect via stress (indirect effect = .02, Sobel = 3.05, $p < .01$). The direct effect of self-care on physical symptoms was significant ($\beta = -12$, $p < .01$), as was the indirect effect via stress (indirect effect = −2, Sobel = −3.33, $p < .001$). Finally, the direct effect of self-care on work-family balance was significant ($\beta = .09$, $p < .05$), as was the indirect effect via stress (indirect effect = .02, Sobel = 3.11, $p < .01$).

We did not find that the influence of self-care on work engagement was partially mediated by experienced stress. Rather, work engagement was associated with self-care directly. The direct effect of self-care on work engagement was significant ($\beta = .10$, $p < .05$), but the indirect effect via stress was not (indirect effect = .00, Sobel = 1.19, $p = .24$).

Table 1. Means, standard deviations, intercorrelations, and reliabilities.

	M	SD	Min./max.	1	2	3	4	5	6	7	8	9	10
1. Second shift workload	3.68	0.54	1–5	(.84)									
2. Energy resources	2.02	0.88	1–5	−.10*	(.95)								
3. Time resources	2.23	0.86	1–5	−.17***	.33***	(.94)							
4. Self-care behaviors	4.90	1.83	0–10	−.03	.37***	.21***	(.36)						
5. Experienced stress	1.49	1.03	0–3	.16**	−.36***	−.59***	−.30***	(.87)					
6. Life satisfaction	3.56	0.82	1–5	−.13***	.25***	.19***	.29***	−.33***	(.88)				
7. Emotional symptoms	1.51	0.61	1–5	.04	−.25***	−.31***	−.16**	.50***	−.37***	(.94)			
8. Physical symptoms	1.59	0.52	1–5	.07	−.26***	−.20***	−.23***	.41***	−.30***	.62***	(.90)		
9. Work engagement	3.54	0.74	1–5	.01	.24***	.00	.18***	−.12*	.32***	−.27***	−.17***	(.88)	
10. Work–family balance	3.46	0.75	1–5	−.01	.35***	.51***	.27***	−.52***	.32***	−.35***	−.27***	.13**	(.85)

Notes: Sample $n = 440$. Correlations appear below diagonal, and coefficient alphas are presented in parentheses along diagonal.
*$p < .05$; **$p < .01$; ***$p < .001$.

The influence of self-care on emotional symptoms was fully mediated by stress rather than partially, as hypothesized. The direct effect of self-care on emotional symptoms was not significant ($\beta = .00$, $p = .94$), however, the indirect effect via stress was significant (indirect effect = −.02, Sobel = −3.46, $p < .001$). This suggested that stress completely accounted for the relationship between self-care and emotional symptoms. We conducted a post hoc test to determine whether there was full mediation by examining whether the direct path between self-care behaviors and emotional symptoms was significant when not in the presence of the indirect (mediating) path. When we respecified the model by deleting the path from stress to emotional symptoms, the path from self-care to emotional symptoms became significant ($\beta = -.16$, $p < .001$). When we added the path back in, the direct path from self-care to emotional symptoms again became non-significant and the indirect (mediating) path was significant. Thus conditions for full mediation were met (Baron & Kenny, 1986).

Discussion

This study examined working mothers as a population at risk for poor well-being and is unique in that no other quantitative study has examined this combination of constructs (second shift, time and energy resources, self-care, stress, and well-being) simultaneously in one testable model. Our results align with prior Leisure Studies research indicating that mothers experience constrained leisure due to their home/family responsibilities (Henderson & Bialeschki, 1991; Shaw & Henderson, 2005), and expands that literature by elucidating the second shift's drain on working mothers' time and energy resources, and the association of available resources with self-care activities.

Our findings were consistent with past research that drained time resources are associated with stress (Höge, 2009), and contributed to the limited but growing literature on energy sustainability and health, with our finding that drained energy resources are associated with stress (Pfeffer, 2010). Our study results suggest that although time and energy are vital resources, they have different effects. For example, drained time resources were more strongly associated with stress than drained energy resources. This may be because time is a finite resource which cannot be recovered once spent, while energy is a dynamic resource that can be drained but also replenished (Fritz et al., 2011). We also found that energy resources were more strongly related to self-care than time resources, which may be a result of our self-care measure consisting of behaviors mainly related to physical self-care, which require more (physical) energy. More research is needed to understand the different nature of these important resources.

One study goal was to inform the development of interventions to improve working mothers' well-being. The finding that self-care was associated with less stress, and that stress mediated relationships between self-care and well-being outcomes, suggests self-care is a promising basis for developing interventions, as it has both stress-reduction and health-promotion functions. This is consistent with the definition of self-care as a health enhancing behavior (McGowan, 2002) and also in keeping with prior research showing that stress plays an influential role in the relationship between various health behaviors (e.g. exercise, sleep, and leisure) and health outcomes (Benham, 2010; Caltabiano, 1995; Dunn, Trivedi, & O'Neal, 2001; Laughlin, 2004).

Health implications

Findings from this study are relevant to working mothers who want healthy, balanced lives, and for those who care for their mental and physical well-being. For psychotherapists treating working mothers, rather than teach general stress-management strategies, they may meet mothers' needs more effectively by utilizing a COR approach centered on addressing the ratio of life demands to personal resources. For instance, counselors can assist mothers in identifying ways to reduce their paid and unpaid workload (e.g. by easing high standards, learning to say no), or by training them to self-regulate (i.e. monitor and conserve) their time and energy resources so that they do not become depleted.

Therapists and other health professionals may also teach working mothers the value of self-care for health enhancement and stress management, and help them to identify opportunities for engaging in it. One way to assist working mothers who report insufficient leisure time (Currie, 2004) is to help them to prioritize self-care as an important life activity, and to deliberately plan it into their schedule so that nothing interferes with it. Several women in our study reported that adopting the mindset that you cannot take care of others if you are not functioning well yourself, was a strategy to alleviate their guilt over taking time for self-care. Other women indicated that because they never had enough time and energy left for self-care once paid work and home/family work were finished, their strategy was to schedule self-care time early in the day, ensuring their resources were not depleted before using them for self-care.

Workplaces can influence women's resources, self-care, and well-being through policies and programs. To provide time for self-care, organizations can institute generous policies for paid work leave (i.e. vacation time, sick time) and offer flexible arrangements that allow workers control over when and where they work (e.g. flextime, telecommuting). They can provide on-site employee assistance programs and health promotion programs that allow access to medical services (e.g. cholesterol screenings, flu immunizations), fitness centers, and weight loss programs during the workday. Employers can also offer affordable, comprehensive (health and mental health) insurance coverage to all employees, including part time workers.

Future directions

Future research should aim for a more comprehensive understanding of the role of self-care in managing stress. In this study, self-care was examined as a mechanism that limits the effects of stress, but self-care can also have a stress-preventing function in the proactive self-regulation of personal resources to prevent resources from becoming depleted in the first place (Aspinwall & Taylor, 1997; Greenglass & Fiksenbaum, 2009). For example, if mothers perceive that the number of work or family demands placed on their available time and energy resources is excessive, they may deliberately reduce their workload, thereby decreasing the demand on resources and ensuring that they do not become depleted.

A second preventative form of self-care may be for mothers to intentionally increase their resources (Ryan & Deci, 2008). Increasing time resources is not possible because time is a finite resource, although a person can gain time within one life domain (i.e.

work, family, leisure) by reallocating it from another. However, it is possible for a person to deliberately increase energy resources by engaging in behaviors that expand the resource pool. Activities that keep the mind and body functioning optimally (e.g. physical exercise, personal development) can potentially expand the capacity of physical and mental energy resources, while neglecting the mind and body (e.g. through a monotonous or sedentary lifestyle) may reduce resource capacity. Self-regulating resource demand and increasing resource capacity are two preventative functions of self-care that can be explored further.

It should be noted that in this study, four out of the five indicators used calculate the self-care index were specifically related to physical self-care (i.e. diet, weight, fitness, sleep). We hope to develop a future self-care index that more fully captures the kinds of behaviors that enhance mental and emotional well-being, such as social support. Moreover, research should explore the psychological mechanisms by which leisure alleviates stress. For example, activities that allow one to switch focus or reclaim personal time are particularly effective in buffering time-based stress, while guilty-pleasure activities are not (Dugan, 2006). Similarly, it would be useful to identify the reasons why different forms of self-care are effective, whether because of psychological disengagement, sense of control, feelings of pleasure, or exposure to variety (Sonnentag & Fritz, 2007). An in-depth exploration of these variables would provide information about the kinds of self-care behaviors that are most effective under particular conditions.

Lastly, researchers should identify the most resource-depleting aspects of the both the paid work and home/family work roles so that effective interventions for preventing resource drain can be developed. If researchers could pinpoint the facets of home/family work (e.g. routine household chores, child-related tasks, household management, emotion work) or the paid work role (e.g. physical tasks, social interaction, information processing) that are most draining of time and energy resources, it would permit the development of targeted interventions.

Limitations

The current study has limitations. The sample of participants was not representative of the entire population, as most were partnered, white, well-educated, and of a higher income level, which greatly impacts access to resources and coping strategies. Future research should examine how this study translates to other populations, including mothers in minority, single-parent, or lower-income families. Similarly the interventions suggested above may not be as relevant to working mothers in per diem jobs or who have no control over when and where they work. Future studies should examine the health of working mothers across diverse contexts and family situations to propose effective solutions that address their specific needs.

The cross-sectional study design prevents the ability to infer causal relationships among variables. Although a path model is tested, it is possible that some of the proposed pathways are bidirectional or the result of some unmeasured variable. Yet we believe there is merit to this path model in demonstrating that all of these constructs are related. The findings are important and provide a foundation for the future study of these relationships in a longitudinal design.

Our data is based on self-report and the need to present a positive image can potentially bias measures. Without data from other sources (e.g. spouses, family members), it is

difficult to know whether mothers' reports of the second shift workload are accurate. Also, rather than depending on self-reported data regarding symptomology, future research should include objective measures (e.g. blood pressure, heart rate, cortisol levels) to assess health-related outcomes.

This study also has limitations regarding the measurement of constructs. Specifically, the self-care index which provided an overall assessment of diet, exercise, weight management, sleep, and leisure needs further development and has never been validated. Moreover, as indicated earlier, the index focused heavily on physical self-care, excluding social and emotional forms of self-care.

Finally, we hypothesized that the second shift drains working mothers' time and energy resources. However, a more thorough assessment of resources would have taken into consideration their cumulative workload, measuring both paid work and home/family work demands. These could be assessed either in terms of the cumulative time or the types of effort (i.e. physical, cognitive) required by both work domains.

Conclusion

This study aimed to provide a more detailed picture of working mothers' well-being. There is a dynamic interplay among the factors that shape women's experiences, operating at the individual, interpersonal, community, organizational and societal levels, and a comprehensive understanding of their lives can only emerge from a multidisciplinary approach, taking into consideration psychological, sociological, and physiological perspectives. Approached in this synergistic way, social science can more accurately model the interactions between women's work, relationships, and health, and offer effective solutions for bringing them more into alignment with one another.

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No potential conflict of interest was reported by the authors.

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